

The diploma thesis examines pupils' understanding of irrational numbers. The aim is to map and evaluate the understanding of grammar school pupils of the second and third year. The evaluation is based on a questionnaire survey of 69 respondents and a semi-structured interview from 12 of them. The results showed that for a large part of these pupils, all numbers with infinite decimal expansion are considered to be irrational numbers and finite decimal expansion as rational numbers. At the end of the thesis I present two approaches that could alleviate this misconception.